IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A mobility management node comprising:

mobility management means for correlating a home address in a home network of a mobile node with a care-of (c/o) c/o address in a network where the mobile node is located after movement;

binding storing means for storing the home address and the c/o address of the mobile node correlated with each other by the mobility management means;

transition detecting means for monitoring transition of the c/o address stored in the binding storing means, and for detecting a prefix of the c/o address before the transition and a prefix of the c/o address after the transition;

transition history storing means for storing a transition frequency of the c/o address in correlation with the prefix of the c/o address before the transition and the prefix of the c/o address after the transition detected by the transition detecting means;

paging area forming means for extracting predetermined combinations of the prefix of the c/o address before the transition with the prefix of the c/o address after the transition, stored by the transition history storing means, and for generating paging area information by a set of said prefixes included in the extracted combinations; and

paging area notifying means for notifying the mobile node of the paging area information generated by the paging area forming means.

Claim 2 (Original): The mobility management node according to Claim 1, wherein the paging area forming means extracts combinations of the prefix before the transition with the prefix after the transition with each of which a transition frequency over a predetermined reference value is correlated among the transition frequencies stored by the transition history

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storing means, extracts combinations having the common prefixes, out of the extracted

combinations, and generates the paging area information by a set of the prefixes included in

the combinations finally extracted.

Claim 3 (Original): The mobility management node according to Claim 2, further

comprising:

registration time interval measuring means for measuring a registration time interval

during which an address of the mobile node is continuously registered in the binding storing

means; and

update frequency measuring means for measuring an update frequency of the c/o

address of the mobile node stored in the binding storing means;

wherein the paging area forming means uses a plurality of predetermined reference

values different from each other to generate the paging area information as to each of the

plurality of predetermined reference values, thereby generating a plurality of paging area

information items, and

wherein the paging area notifying means derives an update frequency per unit time of

the c/o address of the mobile node, based on the registration time interval of the mobile node

measured by the registration time interval measuring means and the update frequency of the

mobile node measured by the update frequency measuring means, and notifies the mobile

node of a paging area information item selected out of the plurality of paging area

information items in accordance with the update frequency per unit time of the c/o address of

the mobile node, based on a predetermined rule defined so that a number of prefixes included

in the paging area information increases against increase of the update frequency per unit

time of the c/o address.

Claim 4 (Currently Amended): A paging area forming method comprising:

a mobility management step wherein mobility management means correlates a home address in a home network of a mobile node with a care-of (c/o) c/o address in a network where the mobile node is located after movement, and stores the addresses in correlation with each other into binding storing means;

a transition detecting step wherein transition detecting means monitors transition of the c/o address stored in the binding storing means, detects a prefix of the c/o address before the transition and a prefix of the c/o address after the transition, and lets transition history storing means store a transition frequency of the c/o address in correlation with the prefix of the c/o address before the transition and the prefix of the c/o address after the transition;

a paging area forming step wherein paging area forming means extracts predetermined combinations of the prefix of the c/o address before the transition with the prefix of the c/o address after the transition, stored in the transition history storing means, and generates paging area information by a set of the prefixes included in the extracted combinations; and

a paging area notifying step wherein paging area notifying means notifies the mobile node of the paging area information generated by the paging area forming means.

Claim 5 (Original): The paging area forming method according to Claim 4, wherein in the paging area forming step the paging area forming means extracts combinations of the prefix before the transition with the prefix after the transition with each of which a transition frequency over a predetermined reference value is correlated among the transition frequencies stored by the transition history storing means, extracts combinations having the common prefixes, out of the extracted combinations, and generates the paging area information by a set of the prefixes included in the combinations finally extracted.

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Claim 6 (Original): The paging area forming method according to Claim 5, further comprising a registration time interval measuring step wherein registration time interval measuring means measures a registration time interval during which an address of the mobile node is continuously registered in the binding storing means; and

an update frequency measuring step wherein update frequency measuring means measures an update frequency of the c/o address of the mobile node stored in the binding storing means;

wherein in the paging area forming step the paging area forming means uses a plurality of predetermined reference values different from each other to generate the paging area information as to each of the plurality of predetermined reference values, thereby generating a plurality of paging areas, and

wherein in the paging area notifying step the paging area notifying means derives an update frequency per unit time of the c/o address of the mobile node, based on the registration time interval of the mobile node measured by the registration time interval measuring means and the update frequency of the mobile node measured by the update frequency measuring means, and notifies the mobile node of a paging area information item selected out of the plurality of paging area information items in accordance with the update frequency per unit time of the c/o address of the mobile node, based on a predetermined rule defined so that a number of prefixes included in the paging area information increases against increase of the update frequency per unit time of the c/o address.

Claim 7 (Currently Amended): A computer readable medium including computer program instructions, which cause a computer to execute a method of mobility management, comprising:

correlating a home address in a home network of a mobile node with a <u>care-of (c/o)</u> ~~c/o~~ address in a network where the mobile node is located after movement;

storing the home address and the c/o address of the mobile node correlated with each other;

monitoring transition of the stored c/o address;

detecting a prefix of the c/o address before the transition and a prefix of the c/o address after the transition;

storing a transition frequency of the c/o address in correlation with the prefix of the c/o address before the transition and the prefix of the c/o address after the transition;

extracting predetermined combinations of the prefix of the c/o address before the transition with the prefix of the c/o address after the transition, stored in the storing a transition frequency step;

generating paging area information by a set of said prefixes included in the extracted combinations; and

notifying the mobile node of the paging area information generated.

Claim 8 (Currently Amended): A mobility management node comprising:

mobility management unit configured to correlate a home address in a home network of a mobile node with a <u>care-of (c/o)</u> ~~c/o~~ address in a network where the mobile node is located after movement;

a first memory configured to store the home address and the c/o address of the mobile node correlated with each other by the mobility management unit;

transition detecting unit configured to monitor transition of the c/o address stored in the first memory, and for detecting a prefix of the c/o address before the transition and a prefix of the c/o address after the transition;

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a second memory configured to store a transition frequency of the c/o address in correlation with the prefix of the c/o address before the transition and the prefix of the c/o address after the transition detected by the transition detecting unit;

paging area forming unit configured to extract predetermined combinations of the prefix of the c/o address before the transition with the prefix of the c/o address after the transition, stored by the second memory, and to ~~top~~ generate paging area information by a set of said prefixes included in the extracted combinations; and

an interface configured to notify the mobile node of the paging area information generated by the paging area forming unit.